

IN THE CLAIMS:

Please cancel Claims 3 to 9 and 25 to 31 without prejudice or disclaimer of subject matter. Please amend Claims 1, 23 and 45 as shown below. The claims, as pending in the subject application, read as follows:

1. (Currently Amended) An information processing apparatus comprising:
 - ~~status acquisition means for acquiring an operation status of a program executed in said apparatus;~~
 - ~~status concept instance generating means for generating a status concept instance that represents the operation status of the program acquired by said status acquisition means;~~
 - a plurality of input means for inputting different types of information;
 - conversion means for converting information input from any of said plurality of input means into a word representing the information;
 - ~~storage means for storing information input from each of said plurality of input~~ a plurality of words converted by said conversion means with an input time thereof;
 - ~~sorting means for sorting at least two types of information~~ the plurality of words stored in said storage means in an order of the input time;
 - a knowledge base for storing knowledge of each concept which includes a word representing the concept, a concept type of the concept, a concept instance rule for defining information necessary for generating an input a property of a concept instance to be filled in each slot provided for the concept in correspondence with respect to a slot type of input concept the slot, and a surface rule for defining an order of a word representing the

concept instance to be filled in each slot and a grammar of the word representing the concept;

input concept instance generating means for generating ~~the~~ a plurality of input concept instance from a sequence of the at least two types of information instances corresponding to the plurality of words sorted in the input time order by said sorting means, by referring to the ~~rule~~ knowledge stored in said knowledge base; and

concept instance unifying means for unifying ~~the status concept instance and the plurality of input concept instance~~ instances by filling a slot of one of the input concept instances with another one of the input concept instances having a concept type which matches with the property of the concept instance for the slot defined by the concept instance rule and the input order of the corresponding word satisfies an order of a word defined by the surface rule.

2. to 9. (Cancelled)

10. (Previously Presented) An information processing apparatus according to claim 1, wherein said status acquisition means acquires the operation status of the program executed said apparatus at an input time.

11. (Previously Presented) An information processing apparatus according to claim 1, further comprising status storage means for storing a past status, wherein said status concept instance generating means generates the status concept instance in accordance with the past status read from said status storage means.

12. (Original) An information processing apparatus according to claim 1, wherein said input means can input key information.

13. (Original) An information processing apparatus according to claim 12, wherein said input means can input character information by converting the key information.

14. (Original) An information processing apparatus according to claim 1, wherein said input means can input speech information.

15. (Original) An information processing apparatus according to claim 14, wherein said input means can input character information by recognizing the speech information and converting the speech information into character information.

16. (Original) An information processing apparatus according to claim 1, wherein said input means can optically input image information.

17. (Original) An information processing apparatus according to claim 16, wherein said input means can input character information of the image information by optically recognizing the image information.

18. (Original) An information processing apparatus according to claim 1, wherein said input means can input hand-written information.

19. (Original) An information processing apparatus according to claim 18, wherein said input means can input the hand-written character information by recognizing the hand-written character information on line.

20. to 22. (Canceled)

23. (Currently Amended) An information processing method performed in an apparatus, said method comprising:

~~a status acquisition step, of acquiring an operation status of a program executed in said apparatus;~~

~~a status concept instance generating step, of generating a status concept instance that represents the operation status of the program acquired in said status acquisition step;~~

an input step, of inputting different types of information by a plurality of input units;

a conversion step, of converting information input from any of said plurality of input units into a word representing the information;

a storing step, of storing ~~information input~~ a plurality of words converted in said ~~input~~ conversion step with an input time thereof in a storage unit;

a sorting step, of sorting ~~at least two types of information~~ the plurality of words stored in the storage unit in an order of the input time;

an input concept instance generating step, of generating ~~an~~ a plurality of input concept instance from a sequence of the at least two types of information instances corresponding to the plurality of words sorted in the input time order in said sorting step,

by referring to ~~a rule~~ knowledge stored in a knowledge base, which stores knowledge of each concept which includes a word representing the concept, a concept type of the concept, a concept instance rule for defining information necessary for generating the input a property of a concept instance to be filled in each slot provided for the concept in correspondence with respect to a slot type of input concept the slot, and a surface rule for defining an order of a word representing the concept instance to be filled in each slot and a grammar of the word representing the concept; and

a concept instance unifying step, of unifying ~~the status concept instance and the plurality of input concept instance instances~~ by filling a slot of one of the input concept instances with another one of the input concept instances having a concept type which matches with the property of the concept instance for the slot defined by the concept instance rule and the input order of the corresponding word satisfies an order of a word defined by the surface rule.

24. to 31. (Cancelled)

32. (Previously Presented) An information processing method according to claim 23, wherein said status acquisition step acquires the operation status of the program executed in said apparatus at an input time.

33. (Previously Presented) An information processing method according to claim 23, further comprising a status storing step, of storing a past status, wherein said status concept instance generating step generates the status concept instance in accordance with the past status read in said status storing step.

34. (Original) An information processing method according to claim 23, wherein said input step can input key information.

35. (Original) An information processing method according to claim 34, wherein said input step can input character information by converting the key information.

36. (Original) An information processing method according to claim 23, wherein said input step can input speech information.

37. (Original) An information processing method according to claim 36, wherein said input step can input character information by recognizing the speech information and converting the speech information into character information.

38. (Original) An information processing method according to claim 23, wherein said input step can optically input image information.

39. (Original) An information processing method according to claim 38, wherein said input step can input character information of the image information by optically recognizing the image information.

40. (Original) An information processing method according to claim 23, wherein said input step can input hand written information.

41. (Original) An information processing method according to claim 40,

wherein said input step can input the hand-written character information by recognizing the hand-written character information on line.

42. to 44. (Canceled)

45. (Currently Amended) A computer-readable storage medium storing a computer-executable information processing program for controlling a computer to perform information processing in an apparatus, said program comprising:

~~code for a status acquisition step, of acquiring an operation status of program executed in said apparatus;~~

~~code for a status concept instance generating step, of generating a status concept instance that represents the operation status of the program acquired by said status acquisition code;~~

code for an input step, of inputting different types of information;

code for a conversion step, of converting information input from any of said plurality of input units into a word representing the information;

code for a storing step, of storing ~~information input~~ a plurality of words converted by said ~~input~~ conversion code with an input time thereof in a storage unit;

code for a sorting step, of sorting ~~at least two types of information~~ the plurality of words stored in the storage unit in an order of the input time;

code for an input concept instance generating step, of generating ~~an a~~ plurality of input concept instance ~~from a sequence of the at least two types of information instances corresponding to the plurality of words~~ sorted in the input time order by said sorting code, by referring to ~~a rule~~ knowledge stored in a knowledge base, which stores

knowledge of each concept which includes a word representing the concept, a concept type of the concept, a concept instance [[a]] rule for defining information necessary for generating the input a property of a concept instance to be filled in each slot provided for the concept in correspondence with respect to a slot type of input concept the slot, and a surface rule for defining an order of a word representing the concept instance to be filled in each slot and a grammar of the word representing the concept; and

code for a concept instance unifying step, of unifying ~~the status concept instance~~ and the plurality of input concept instance instances by filling a slot of one of the input concept instances with another one of the input concept instances having a concept type which matches with the property of the concept instance for the slot defined by the concept instance rule and the input order of the corresponding word satisfies an order of a word defined by the surface rule.